

# Vision-100

## FAA Reauthorization



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**Planning and Programming Branch**



# What is VALE?

- **New permanent program**
  - Began October 1, 2004 for FY '05
- **Expansion of AIP and PFC eligibility (not a budget)**
  - Voluntary “stand-alone” projects as well as traditional “environmental mitigation”
  - Mobile sources
- **Clarification of procedures**
  - AIP Handbook (pending Order 5100.3B, Chg. 2, Sec. 585) & PFC Part 158 rev's
  - Easier documentation and justifications (SIPs, mitigation requirements, other documentation)

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# Environmental and Energy Importance



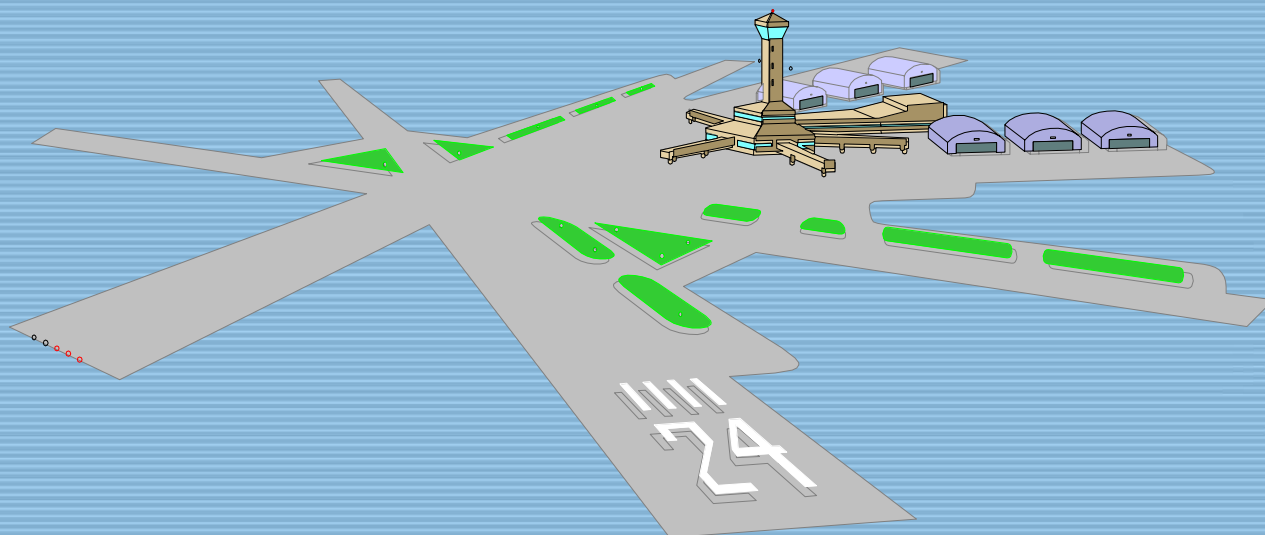
- **Air quality is a growing issue (with noise)**
  - Earlier and greater emission reductions
  - All ground-based sources at airports except for aircraft
- **Air quality and airport improvements can happen together**
- **Less reliance on foreign oil imports**

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# Major Incentives for Early Action to meet Clean Air Act

- **More Federal \$\$ and resources**
- **Airport emission reduction credits**



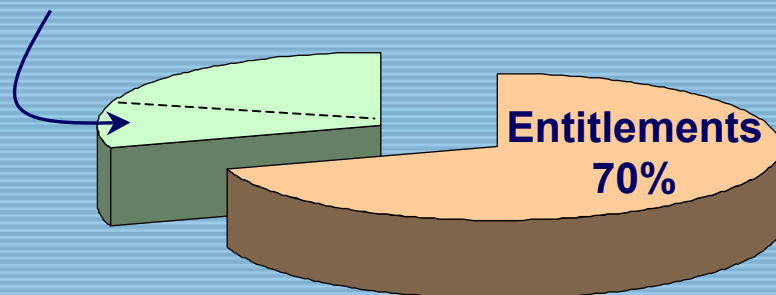




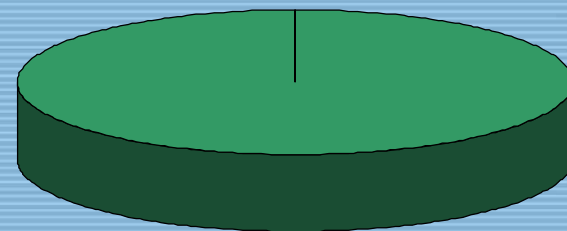
# Two Major Airport Funding Programs

**Airport Improvement Program (AIP)**  
About \$3 Billion/yr.

30% Discretionary  
1/3 is “noise and air quality set-aside”



**Passenger Facility Charges (PFC)**  
About \$2 Billion/yr.



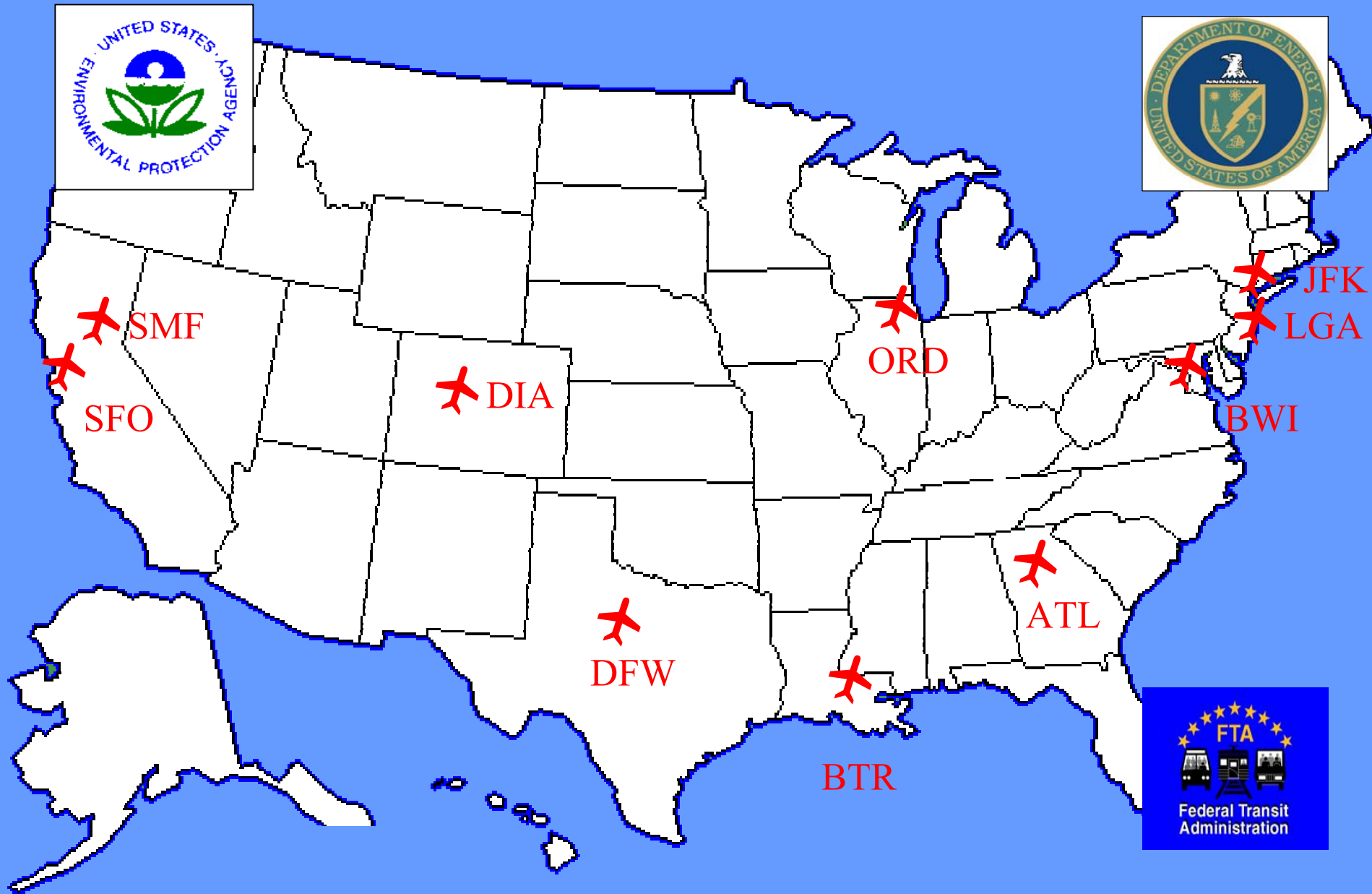


# Challenges

- **Expanding to a national program**
  - One-third (34%) of commercial service airports are located in nonattainment or maintenance areas - 41 of the 50 busiest airports
- **Allowing more alternative and clean conventional fuels, plus hybrid vehicles**
- **Developing low-emission vehicle standards**
- **Concluding a national agreement with EPA on airport emission credits**
- **Integrating Vision-100 emission provisions**
  - Clean Air Act
  - General Conformity and NSR regulations
  - AIP and PFC requirements

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# VALE is based on AIR-21 ILEAV Pilot with other Federal agency technical support



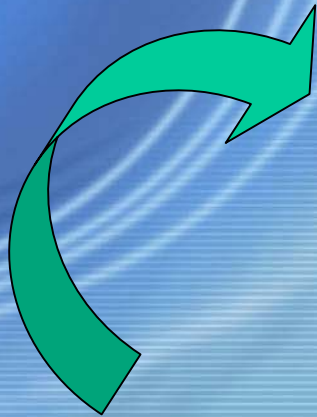


# General Eligibility

- **Only one EPA classification needed**
  - e.g., Portland is a CO maintenance area
- **Airport-dedicated**
- **Infrastructure**
  - Airport-owned (PFC lease option)
  - Primary emissions purpose
- **Airport usage commitments**
- **Standard Grant Assurances (AIP) and Funding Requirements (PFC)**
  - Guidelines in AIP Handbook (Order 5100.38B) and PFC Part 158
    - Grants/funds spent appropriately on a timely basis
    - Enforcement (termination for cause/ convenience)



# Special Conditions



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- 1. Equipment labeling**  
(vehicles and infrastructure)
- 2. Vehicles remain at airport for useful life**  
(average years provided)
- 3. Tracking and monitoring**
- 4. Replace in-kind or cleaner**



# Airports are a microcosm of the national fleet





# Vehicle Eligibility

- **Airport GSE and GAV**
  - No vehicles operating regionally (e.g., per. cars, taxis, limos, super shuttles)
  - No O&M costs (e.g., fuel, battery replacement)
- **New vehicles must be EPA-certified to meet VALE standards**
  - *Incremental* costs only - no *base* costs
- **Retrofits for existing vehicles must be EPA-verified**
  - Full cost of retrofit technology
  - EPA web site:  
[www.epa.gov/otaq/retrofit](http://www.epa.gov/otaq/retrofit)  
(see technology, verified products)

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# Individual New Vehicle Low-Emission Standards

- **Based on national low-emission vehicle fleet standards**
- **Emissions performance per vehicle for long-term gains, not incremental ones**
- **Simplified (tail pipe emissions only)**
- **Reflects existing EPA standard-setting**
  - Weight classes
  - On-road vs. non-road
  - Spark (gasoline) vs. compression ignition (diesel)
- **Provides “safety net” to ensure cost-effective vehicle acquisitions regardless of fuel choice**

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# Alternative Fuels for AIP

- **Vision-100, AIP–Sec. 159(d)**  
*“Low-emission technology ...that relies exclusively on alternative fuels that are substantially non-petroleum based, as defined by the Department of Energy, but not excluding hybrid systems...”*
- **Defined by DOE EPCAct**
- **Fuel neutral**
- **Alternative fuels are well-suited to airports**
  - Centralized traffic patterns
  - Available land for refueling stations

## Eligible Alt. Fuels

- Electric
- Natural Gas
- Propane
- Ethanol 85
- Methanol 85
- Hydrogen
- Coal-derived liquids
- Biodiesel (B100)
- P-series
- Hybrid Technology

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# Vehicle Eligibility Varies by Funding Source

## AIP Vehicles

- New vehicles
- AFVs and hybrids
- Airport-owned



## PFC Vehicles

- New and retrofit
- AFVs, hybrids, and clean conventional
- Airport-owned and tenant-owned



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# AIP GSE Retrofit Pilot Program

- **GSE retrofits**
  - Cleaner technology and fuels
  - Tenant ownership and supporting infrastructure allowed
- **10 commercial service airports in NA/MAs**
  - Each grant up to \$500,000
- **Selection criteria similar to VALE**
  - Cost effectiveness
  - EPA-verified control technology
  - State emission credit assurance
- **Project approval by Headquarters**

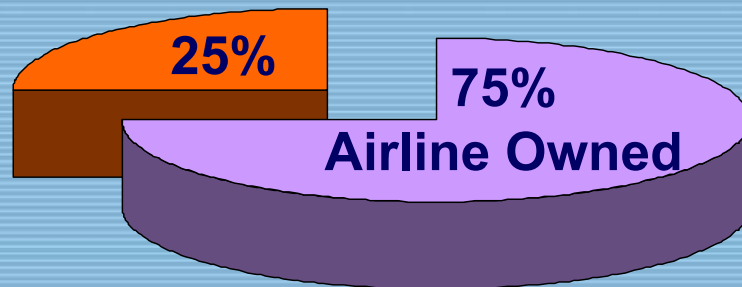




# GSE by Owner & Fuel Type

(about 72,000 total units – average age of 9 -10 years)

Other-owned

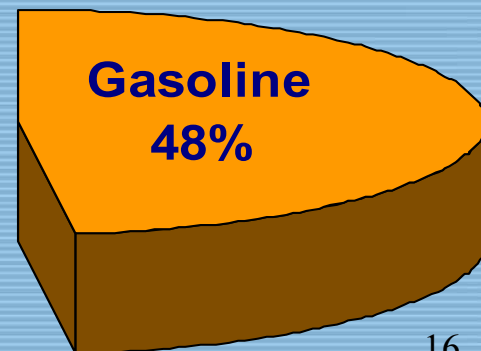
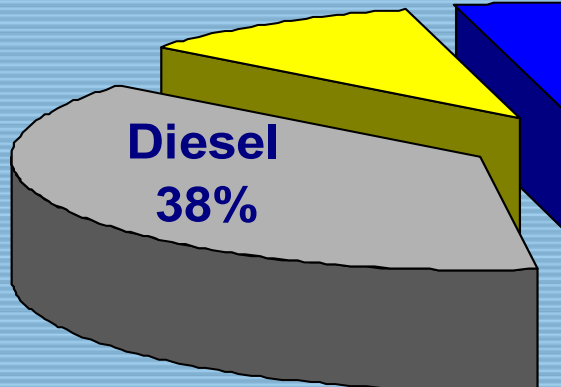


Electric  
10%

CNG/LPG  
4%

Diesel  
38%

Gasoline  
48%



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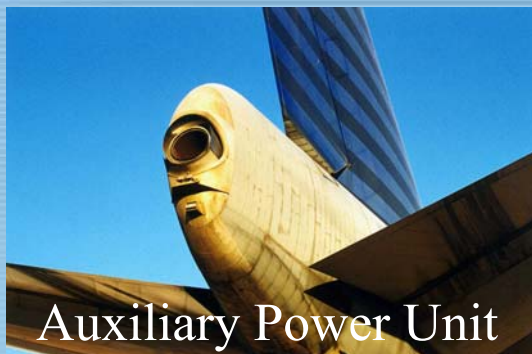




# Eligible Infrastructure Examples



*Replaced by...*



*Emissions  
reduced  
by...*



- **Refueling/recharging stations (public access possible)**
- **Conversions of airport power plants, generators, and other combustion sources to cleaner fuels**
- **Public transit lines/connections (only portion on airport property)**



# Agency Coordination

- **Project planning**
- **Implementation**
- **Tracking**

**Airport  
Sponsor**

**FAA**

- **National program guidance**
- **AIP/PFC funding approval**
- **Compliance**

**State  
AQ  
Agency**

- **Verify surplus reductions**
- **Relation to SIP**
- **AERC issuance**

**EPA**

- **National AERC guidance**
- **Low-emission technology certification**
- **FAA standards support**

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# FAA Funding Contingent on State/EPA Credit Guarantee

- **AERCs alter the old “dynamic”**

*Why should the sponsor voluntarily expend mitigation measures that could help later?*

- **Sponsors can use AERCs for:**

- General Conformity
- New Source Review

- ***Vision-100* AERC requirements**

- Consistent nationally
- Meet CAA criteria: quantifiable, surplus, permanent, Federally enforceable
- Issued on a timely basis
- Available to ILEAV projects retroactively





# Sponsor Project Application Checklist



- State AERC letter of assurance to FAA
- Cost-effectiveness (deployment not R&D)
- Program low emission vehicle standards
- Alternative/cleaner fuels
- Airport-dedicated vehicle & use commitments
- Nonattainment/maintenance area
- Commercial service airport





# Program Management and Information

- **Managed by FAA regional offices**
  - Regional funding approvals
- **Documents available at:**  
***[www.faa.gov/arp/environmental/vale](http://www.faa.gov/arp/environmental/vale)***
  - List of eligible airports
  - AIP and PFC announcement letters
  - FAA Technical Report
    - V1.1 update pending
      - ✓ FAA evaluation checklist
      - ✓ PFC timeframes
      - ✓ Clarification of eligible AIP expenses
  - EPA/FAA AERC Report
  - Worksheets and label
- **Supported by EDMS V4.2**